

WE CLAIM:

1. A flame simulating assembly for providing at least one image of flames, the flame simulating assembly having:
 - at least one light source;
 - a first screen positioned in a first path of light from said at least one light source, the first screen being adapted to receive light from said at least one light source to form said at least one image of flames transmittable through the first screen; and
 - a second screen positioned in a second path of light from said at least one light source, the second screen being adapted to receive light from said at least one light source to form said at least one image of flames transmittable through the second screen.
2. A flame simulating assembly according to claim 1 in which each of the first screen and the second screen at least partially define substantially vertical planes respectively and said at least one light source is positioned substantially between said planes.
3. A flame simulating assembly according to claim 1 additionally including at least one flame effect element for configuring light from said at least one light source to produce said at least one image of flames, said at least one flame effect element being positioned in said at least one path of light.
4. A flame simulating assembly according to claim 1 additionally including at least one flicker element for creating a fluctuating light, said at least one flicker element being positioned in at least one path of light selected from the group consisting of the first path of light and the second path of light, said at least one path of light extending from said at least one light source to at least one screen selected from the group consisting of the first screen and the second screen, whereby the fluctuating light is received by

said at least one screen to form said at least one image of flames transmittable through said at least one screen.

5. A flame simulating assembly according to claim 1 additionally including at least one flame effect element for configuring light from said at least one light source to produce said at least one image of flames, said at least one flame effect element being positioned in said first path of light between said at least one light source and the first screen and in said second path of light between said at least one light source and the second screen.
6. A flame simulating assembly according to claim 5 in which the first screen and the second screen are positioned on opposite sides of said at least one flame effect element.
7. A flame simulating assembly according to claim 5 in which said at least one flame effect element includes a body portion which is at least partially translucent.
8. A flame simulating assembly according to claim 7 in which the body portion is positioned substantially between the first screen and the second screen, the body portion including a first surface facing said first screen and a second surface facing said second screen.
9. A flame simulating assembly according to claim 8 in which at least one of said first surface and said second surface of the body portion is at least partially reflective.
10. A flame simulating assembly according to claim 9 in which:
 - the first surface of the body portion is at least partially reflective;
 - the flame effect element includes a substantially non-reflective portion disposed on the first surface;

the non-reflective portion including at least one aperture positioned in said first path of light and in said second path of light, said at least one aperture being formed such that said at least one aperture configures light from said at least one light source to form said at least one image of flames; and
said at least one image of flames being transmitted through the first screen and the second screen respectively.

11. A flame simulating assembly according to claim 10 in which said at least one aperture defines at least one exposed part of the first surface of the body portion, such that light from said at least one light source is substantially reflected by said at least one exposed part of the first surface to the first screen, to form said at least one image of flames transmittable therethrough.
12. A flame simulating assembly according to claim 10 in which said at least one aperture defines at least one exposed part of the first surface of the body portion, such that light from said at least one light source is substantially transmitted through said at least one exposed part of the first surface of the body portion to the second screen, to form said at least one image of flames transmittable therethrough.
13. A flame simulating assembly according to claim 10 in which the substantially non-reflective portion includes an outside surface facing the first screen, the outside surface having a matte finish.
14. A flame simulating assembly according to claim 10 in which the non-reflective portion comprises a layer of substantially non-reflective black paint.

15. A flame simulating assembly according to claim 10 in which the non-reflective portion comprises a sheet metal element with an outside surface facing the first screen, the outside surface being coloured black, with a substantially non-reflective finish.
16. A flame simulating assembly according to claim 10 additionally including at least one flicker element for creating a fluctuating light, said at least one flicker element being positioned in at least one path of light selected from the group consisting of the first path of light and the second path of light, said at least one path of light extending from said at least one light source through said at least one flame effect element to at least one screen selected from the group consisting of the first screen and the second screen, whereby the fluctuating light forms said at least one image of flames transmittable through said at least one screen.
17. A flame simulating assembly according to claim 10 additionally including:
 - a first flicker element for creating fluctuating light, the first flicker element being positioned in a primary path of light between said at least one light source and the flame effect element, said fluctuating light forming said at least one image of flames transmitted through the first screen and the second screen respectively; and
 - a second flicker element for creating fluctuating light, the second flicker element being positioned in a secondary path of light between said at least one light source and the flame effect element, said fluctuating light forming said at least one image of flames transmitted through the first screen and the second screen respectively.
18. A flame simulating assembly according to claim 1 additionally including a first flicker element for creating a fluctuating light to produce a first image of flames transmitted through the first screen, the first flicker element

being positioned in said first path of light between said at least one light source and the first screen.

19. A flame simulating assembly according to claim 1 additionally including a second flicker element for creating a fluctuating light to produce a second image of flames transmitted through the second screen, the second flicker element being positioned in said second path of light between said at least one light source and the second screen.
20. A flame simulating assembly according to claim 1 additionally including:
 - a first flicker element for causing light from said at least one light source to fluctuate, for producing a first image of flames transmitted through the first screen, the first flicker element being positioned in said first path of light between said at least one light source and the first screen; and
 - a second flicker element for causing light from said at least one light source to fluctuate, for producing a second image of flames transmitted through the second screen, the second flicker element being positioned in said second path of light between said at least one light source and the second screen.
21. A flame simulating assembly according to claim 20 additionally including at least one flame effect element for configuring the fluctuating light to simulate flames, said at least one flame effect element being positioned in the first and second paths of light to form the first and the second images of flames transmittable through the first screen and the second screen respectively.
22. A flame simulating assembly according to claim 1 additionally including at least one simulated fuel bed positioned adjacent to at least one screen selected from the group consisting of the first screen and the second

screen such that said at least one image of flames transmitted through said at least one screen is positioned proximal to said at least one simulated fuel bed.

23. A flame simulating assembly according to claim 20 additionally including a first simulated fuel bed and a second simulated fuel bed positioned adjacent to the first screen and the second screen respectively such that the first image of flames and the second image of flames transmitted through the first and second screens respectively are positioned proximal to the first simulated fuel bed and the second simulated fuel bed respectively.
24. A flame simulating assembly for providing at least one image of flames, the flame simulating assembly having:
 - a first simulated fuel bed;
 - a second simulated fuel bed;
 - at least one light source;
 - a first screen including a first front surface and positioned behind the first simulated fuel bed in a first path of light from said at least one light source for transmitting said at least one image of flames through the first front surface proximal to the first simulated fuel bed; and
 - a second screen including a second front surface and positioned behind the second simulated fuel bed in a second path of light from said at least one light source for transmitting said at least one image of flames through the second front surface proximal to the second simulated fuel bed.
25. A flame simulating assembly according to claim 24 additionally including at least one flicker element for creating a fluctuating light, said at least one flicker element being positioned in at least one path of light selected from

the group consisting of said first path of light and said second path of light, whereby the fluctuating light forms said at least one image of flames transmittable through the first and the second front surfaces respectively.

26. A flame simulating assembly according to claim 25 additionally including at least one flame effect element for configuring light from said at least one light source to produce said at least one image of flames, said at least one flame effect element being positioned in said first path of light between said at least one light source and the first screen and in said second path of light between said at least one light source and the second screen.
27. A flame simulating assembly according to claim 24 additionally including:
 - a first flicker element for causing light from said at least one light source to fluctuate, for producing a first image of flames transmitted through the first front surface, the first flicker element being positioned in said first path of light between said at least one light source and the first screen; and
 - a second flicker element for causing light from said at least one light source to fluctuate, for producing a second image of flames transmitted through the second front surface, the second flicker element being positioned in said second path of light between said at least one light source and the second screen.
28. A flame simulating assembly according to claim 27 additionally including at least one flame effect element for configuring the fluctuating light to simulate flames, said at least one flame effect element being positioned in the first and second paths of light to form the first and the second images of flames transmittable through the first front surface and the second front surface respectively.

29. A flame simulating assembly according to claim 28 in which said at least one flame effect element includes:
- at least one opening positioned in said second path of light to permit light from said at least one light source to pass through said at least one opening to said second screen; and
 - at least one reflective region positioned in said first path of light for reflecting light from said at least one light source to said first screen.
30. A flame simulating assembly according to claim 28 in which said at least one flame effect element includes at least one opening for configuring light from the light source to simulate flames.
31. A flame simulating assembly according to claim 28 in which said at least one flame effect element includes a first side facing the first screen and a second side facing the second screen, the second side and the first side being disposed opposite to each other, and in which each of the first and second sides includes a reflective portion for reflecting light from said at least one light source to the first screen and the second screen respectively to produce said first and second images of flames respectively.
32. A flame simulating assembly according to claim 24 in which at least one of said screens includes a pattern on the front surface thereof for simulating a firebrick wall positioned adjacent to said at least one image of flames transmitted through said at least one of said screens.
33. A flame simulating assembly according to claim 24 in which the first front surface and the second front surface are at least partially reflective and in which each of the first screen and the second screen includes a back

surface for diffusing light from said at least one light source and transmitting said at least one image of flames.

34. A flame simulating assembly according to claim 33 in which each of the partially reflective front surfaces includes a substantially non-reflective matte region thereon, each said non-reflective matte region being disposed distal from the first simulated fuel bed and the second simulated fuel bed respectively, each of the screens having a portion of the front surface being a generally reflective region, such that the first simulated fuel bed and the second simulated fuel bed are substantially the only objects reflected in the reflective regions respectively, whereby light from said at least one light source is transmitted through the front surfaces of the screens respectively to produce said at least one image of flames.
35. A flame simulating assembly according to claim 34 which each said front surface further includes a transition region which is partially reflective and partially non-reflective, each said transition region being positioned between each said non-reflective matte region and each said reflective region on each said partially reflective surface on each said screen respectively.
36. A flame simulating assembly according to claim 33 in which at least one of the back surfaces of the first screen and the second screen is non-planar such that said at least one image of flames transmitted through said at least one back surface appears to be substantially three-dimensional.
37. A flame simulating assembly according to claim 24 additionally including at least one reflector positioned in front of at least one of the first simulated fuel bed and the second simulated fuel bed, said at least one reflector being positioned to reflect light from said at least one light source onto said at least one simulated fuel bed to simulate glowing embers.

38. A flame simulating assembly according to claim 24 in which each of the first screen and the second screen includes a top region positioned distal from the first simulated fuel bed and the second simulated fuel bed respectively, the top regions being adapted to permit substantially unobstructed observation therethrough.
39. A flame simulating assembly according to claim 38 in which each of the top regions is substantially transparent.
40. A flame simulating assembly according to claim 38 in which each of the top regions is substantially translucent.
41. A flame simulating assembly according to claim 24 additionally including a housing for supporting each of the first screen and the second screen in substantially upright positions, the housing including at least one top panel positioned above the screens, each of the first screen and the second screen including a top edge distal from the first simulated fuel bed and the second simulated fuel bed respectively, the top edges of the screens being spaced apart from said at least one top panel to define upper openings formed in the flame simulating assembly above the screens, permitting substantially unobstructed observation through the upper openings.
42. A flame simulating assembly having:
- a first simulated fuel bed;
 - a second simulated fuel bed;
 - at least one light source;
 - at least one flicker element positioned in a path of light from the light source, for creating a fluctuating light;

a first screen positioned behind the first simulated fuel bed for transmitting the fluctuating light; and
a second screen positioned behind the second simulated fuel bed for transmitting the fluctuating light,
whereby the fluctuating light is transmitted through the first screen and the second screen to simulate flames appearing above the first simulated fuel bed and the second simulated fuel bed respectively.

43. A flame simulating assembly for providing at least one image of flames, the flame simulating assembly comprising:
at least one light source;
a first screen;
a second screen;
a flame effect element positioned in at least one path of light between said at least one light source and the first and second screens respectively; and
the flame effect element being adapted to configure light from said at least one light source to form said at least one image of flames transmittable through the first and second screens respectively.
44. A flame simulating assembly according to claim 43 additionally including at least one flicker element positioned in said at least one path of light between said at least one light source and the flame effect element, for causing light from the light source to fluctuate.
45. A flame simulating assembly according to claim 43 in which the flame effect element includes a body portion having a first side facing the first screen and a second side facing the second screen.
46. A flame simulating assembly according to claim 45 in which the body portion is substantially transparent.

47. A flame simulating assembly according to claim 45 in which the body portion is substantially translucent.
48. A flame simulating assembly according to claim 45 in which the first side is at least partially reflective.
49. A flame simulating assembly according to claim 48 in which the flame effect element includes a first mask portion positioned on the first side of the body portion, the first mask portion including at least one aperture positioned in said at least one path of light, said at least one aperture being formed to configure light from the light source into said at least one image of flames.
50. A flame simulating assembly according to claim 49 comprising:
 - a first flicker element for causing light from said at least one light source to fluctuate, the first flicker element being positioned in a primary path of light between said at least one light source and the flame effect element; and
 - a second flicker element for causing light from said at least one light source to fluctuate, the second flicker element being positioned in a secondary path of light between said at least one light source and the flame effect element.
51. A flame simulating assembly according to claim 49 in which the flame effect element additionally includes a second mask portion positioned on the second side of the body portion, the second mask portion including at least one aperture positioned in said at least one path of light, said at least one aperture being formed to configure light from the light source into said at least one image of flames.

52. A flame simulating assembly according to claim 51 comprising:
a first flicker element for causing light from said at least one light source to fluctuate, the first flicker element being positioned in a primary path of light between said at least one light source and the flame effect element; and
a second flicker element for causing light from said at least one light source to fluctuate, the second flicker element being positioned in a secondary path of light between said at least one light source and the flame effect element.
53. A flame simulating assembly according to claim 49 in which the first mask portion comprises a layer of paint.
54. A flame simulating assembly according to claim 49 in which the first mask portion comprises sheet metal.
55. A flame simulating assembly according to claim 46 in which the flame effect element includes a partially reflective flame-shaped portion positioned on the first side of the body portion, the flame-shaped portion being adapted to configure light from the light source to form said at least one image of flames.
56. A flame simulating assembly according to claim 55 in which the flame effect element includes a first mask portion positioned on the first side of the body portion, the first mask portion including at least one aperture substantially conforming to the flame-shaped portion.
57. A flame simulating assembly according to claim 56 in which the first mask portion comprises a layer of paint.

58. A flame simulating assembly according to claim 56 in which the first mask portion comprises sheet metal.
59. A flame simulating assembly according to claim 56 additionally including at least one flicker element for causing light from the light source to fluctuate, said at least one flicker element being positioned in a path of light between said at least one light source and the flame effect element.
60. A flame simulating assembly according to claim 56 comprising:
- a first flicker element for causing light from said at least one light source to fluctuate, the first flicker element being positioned in a primary path of light between said at least one light source and the flame effect element; and
 - a second flicker element for causing light from said at least one light source to fluctuate, the second flicker element being positioned in a secondary path of light between said at least one light source and the flame effect element.